



DRAFT - CUPS Software Security Report
CUPS-SSR-1.0

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1 Scope

1.1 Identification

This software security report provides an analysis of possible security concerns for the Common UNIX Printing System ("CUPS") Version 1.0.

1.2 System Overview

The Common UNIX Printing System provides a portable printing layer for UNIX® operating systems. It has been developed by Easy Software Products to promote a standard printing solution for all UNIX vendors and users. CUPS provides the System V and Berkeley command-line interfaces.

CUPS uses the Internet Printing Protocol (IETF-IPP) as the basis for managing print jobs and queues. The Line Printer Daemon (LPD, RFC1179), Server Message Block (SMB), and AppSocket protocols are also supported with reduced functionality.

CUPS adds network printer browsing and PostScript Printer Description ("PPD")-based printing options to support real world applications under UNIX.

1.3 Document Overview

This software security report is organized into the following sections:

- 1 - Scope
- 2 - References
- 3 - Risk Identification
- 4 - Risk Assessment
- A - Glossary

2 References

2.1 CUPS Documentation

The following CUPS documentation is referenced by this document:

- CUPS-CMP-1.0: CUPS Configuration Management Plan
- CUPS-IDD-1.0: CUPS System Interface Design Description
- CUPS-SAM-1.0.x: CUPS Software Administrators Manual
- CUPS-SDD-1.0: CUPS Software Design Description
- CUPS-SPM-1.0: CUPS Software Programming Manual
- CUPS-SSR-1.0: CUPS Software Security Report
- CUPS-STP-1.0: CUPS Software Test Plan
- CUPS-SUM-1.0.x: CUPS Software Users Manual
- CUPS-SVD-1.0.x: CUPS Software Version Description

2.2 Other Documents

The following non-CUPS documents are referenced by this document:

- IEEE 1387.4, System Administration: Printing (draft)
- IPP/1.0: Additional Optional Operations - Set 1
- IPP/1.0: Encoding and Transport
- IPP/1.0: Implementers Guide
- IPP/1.0: Model and Semantics
- RFC 1179, Line Printer Daemon Protocol

3 Risk Identification

3.1 Local Access Risks

3.2 Remote Access Risks

4 Risk Assessment

4.1 Local Access Risks

4.2 Remote Access Risks

A Glossary

A.1 Terms

C

A computer language.

parallel

Sending or receiving data more than 1 bit at a time.

pipe

A one-way communications channel between two programs.

serial

Sending or receiving data 1 bit at a time.

socket

A two-way network communications channel.

A.2 Acronyms

ASCII

American Standard Code for Information Interchange

CUPS

Common UNIX Printing System

ESC/P

EPSON Standard Code for Printers

FTP

File Transfer Protocol

HP-GL

Hewlett-Packard Graphics Language

HP-PCL

Hewlett-Packard Printer Control Language

HP-PJL

Hewlett-Packard Printer Job Language

IETF

Internet Engineering Task Force

IPP

Internet Printing Protocol

ISO

International Standards Organization

LPD

Line Printer Daemon

MIME

Multimedia Internet Mail Exchange

PCL

Page Control Language

PPD

PostScript Printer Description

SMB

Server Message Block

TFTP

Trivial File Transfer Protocol